

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
31 March 2005 (31.03.2005)

PCT

(10) International Publication Number  
**WO 2005/029113 A1**

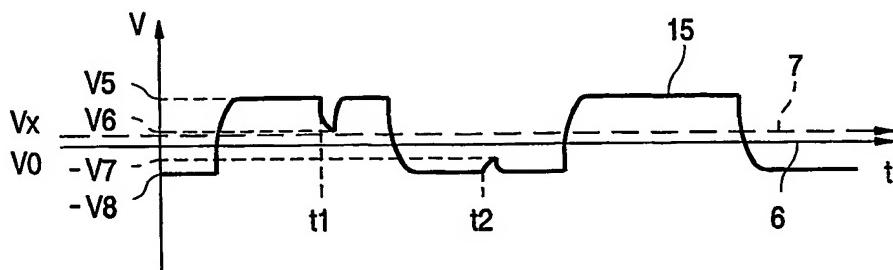
- (51) International Patent Classification<sup>7</sup>: **G01R 35/00**, 15/20
- (21) International Application Number: **PCT/IB2004/051718**
- (22) International Filing Date: 9 September 2004 (09.09.2004)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 03103502.5 22 September 2003 (22.09.2003) EP
- (71) Applicant (for DE only): **PHILIPS INTELLECTUAL PROPERTY & STANDARDS GMBH [DE/DE]**; Stein-damm 94, 20099 Hamburg (DE).
- (71) Applicant (for AE, AG, AL, AM, AT, AU, AZ, BA, BB, BE, BG, BR, RW, BY, BZ, CA, CH, CN, CO, CR, CU, CY, CZ, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, SZ, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW only): **KONINKLIJKE PHILIPS ELECTRONICS N. V. [NL/NL]**; Groenewoud-seweg 1, NL-5621 BA Eindhoven (NL).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): **LUERKENS, Peter [DE/DE]**; c/o Philips Intellectual Property &, Standards GmbH Weissausstr. 2, 52066 Aachen (DE).
- (74) Agent: **MEYER, Michael**; Philips Intellectual Property &, Standards GmbH Weissausstr. 2, 52066 Aachen (DE).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, SZ, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Published:**

— with international search report

[Continued on next page]

(54) Title: METHOD OF DETERMINING A ZERO POINT OF A CURRENT SENSOR



WO 2005/029113 A1

(57) Abstract: The invention relates to a method of determining a zero point (VO) of a current sensor in a circuit arrangement for operating a gas discharge lamp. The invention is characterized by the following process steps: the current (11) through the sensor is switched off for a short period during a first half wave (13) and a first test value (V6) is determined, then the current (11) through the sensor is switched off for a short period during a second half wave (14) having a different polarity and a second test value (-V7) is determined, whereupon an average value is formed of the two test values (V6, -V7), and the zero point (Vx, VO) is determined by means of said average value. It is prevented thereby that the zero point drifts during lamp operation, for example owing to heating, and that amplitudes of the positive and negative half waves (13, 14) of the lamp current (11) are formed differently. Impairment of lamp life and visible artefacts in a presented projection image are prevented.



*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*